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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,873	12/12/2003	Virgilio Go Boncan	020569-02100	1045

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EXAMINER

DAVIS, OCTAVIA L

ART UNIT PAPER NUMBER

2855

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/734,873

Applicant(s)

GO BONCAN ET AL.

Examiner

Octavia Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/12/03.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors because it contains more than 20 pages. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

2. Claims 6, 14 and 19 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claims, or amend the claims to place the claims in proper dependent form, or rewrite the claims in independent form. Regarding claims 6, 14 and 19, it is unclear whether or not the invention is directed to "A method of determining Young's modulus for a plurality of cement specimens" or to "A method of determining a Young's modulus of a cement specimen".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 8, 9, 11, 13, 14 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Callahan.

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Regarding claims 8, 11 and 13, Callahan discloses a cell for measuring stresses in prestressed concrete comprising a stress cell including a top plate 7 and a bottom plate 9, a means 27, 63 for applying an axial stress and strain to a member 49 (See Col. 3, lines 8 – 13), a ram 29 connected to the source 63, strain gauges 51 which measure the axial strain and stress exerted on deformed beams 49 (See Col. 2, lines 31 – 33 and 51 – 54) and a readout device 55 for recording the deformation measured by the strain gauges (See Cols. 2 and 3, lines 64 – 68 and 1 – 4).

Regarding claim 9, the bottom plate 9 is provided with central disk-like cavities to form a central portion 39 (See Col. 2, lines 20 – 26).

Regarding claims 14 and 15, a plurality of stress cells are subjected to a series of events simulating (See Col. 3, lines 32 – 40).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 – 7 and 16 – 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maki, Jr. in view of Lacy.

Regarding claims 1, 16, 17 and 19, Maki, Jr. discloses a method and apparatus for measuring a cement sample comprising inserting a cement specimen S into a cement mold 11 inside a pressure vessel 14 (See Col. 5, lines 34 – 38), increasing the temperature and pressure within the vessel (See Col. 5, lines 43 – 46), allowing the specimen S to cure and applying an axial stress and strain to the

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specimen (See Col. 7, lines 57 – 67) but does not disclose determining a ratio of axial stress and strain in the specimen wherein the ratio is the Young's modulus. However, Lacy discloses an apparatus and method for non-destructively measuring a sample of material to determine changes in Young's modulus comprising a sample of material 325 that is subjected to expansion or contraction, sensors 255, 310 positioned to transmit and receive ultrasonic signals through the sample and an electronic subsystem 120 – 130 that includes a CPU 130 that averages the multiple replications and uses these figures to calculate the Young's modulus (See Col. 3, lines 34 – 60).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Maki, Jr. according to the teachings of Lacy for the purpose of, Providing a method to analyze cement including determining Young's modulus to indicate the time at which cement sets up, the degree of cement slurry thickening and the degree that the cement shrinks or expands under simulated down-hole conditions (See Lacy, Col. 2, lines 32 – 38).

Regarding claims 2, 7 and 18, a sensor 25 measures the deflection of the specimen S (See Col. 6, lines 6 – 11 and 21 – 24, Col. 8, lines 60 – 67 and Col. 9, lines 1 – 3).

Regarding claim 3, the pressure vessel 14 is at a greater pressure than atmospheric pressure (See Col. 8, lines 7 – 30).

Regarding claim 4, the pressure vessel is at a specific temperature (See Col. 5, lines 43 – 46).

Regarding claim 5, a data unit 147 accumulates data (See Col. 13, lines 44 – 62).

Regarding claims 6 and 29, a plurality of samples are placed in the pressure vessel 14 (See Col. 3, lines 7 – 15).

Claim Rejections - 35 USC § 103

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7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Callahan in view of Auburndale et al and Maki, Jr.

Regarding claim 10, Callahan discloses all of the limitations of these claims except for a cam and a piston, wherein the piston extends into the pressure chamber. However, Auburndale et al disclose an apparatus for manufacturing prestressed concrete members comprising a cam 310 that engages with a mold 100 as the mold approaches substations (See Col. 6, lines 55 – 61) and a piston 422 that extends into a chamber that includes the mold (See Col. 10, lines 34 – 36).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Callahan according to the teachings of Auburndale et al for the purpose of, aligning the mold to a desired transverse position (See Auburndale et al, Col. 6, lines 55 – 57) and to control the transverse positioning of a head with respect to the mold during the strand placement operation (See Auburndale et al, Col. 10, lines 34 – 36).

Regarding claim 12, Callahan discloses all of the limitations of these claims except for a teaching that the device comprises a thermocouple. However, Maki, Jr. discloses a method and apparatus for measuring a cement sample comprising a thermocouple 55 that is attached to a chamber area 14 (See Col. 8, lines 1- 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Callahan according to the teachings of Maki, Jr. for the purpose of,

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positioning a device in a threaded opening to close a port after air has been displaced from a chamber (See Maki, Jr., Col. 8, lines 3 – 6).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Babcock (4,389,896) discloses a method of gathering information from sensors from which the Young's modulus can be obtained.

Virtanen (4,999,959) discloses a pre-stressed construction element of composite structure.

10. Any inquiry concerning this communication should be directed to examiner Octavia Davis at telephone number (571) 272 - 2176. The examiner can normally be reached on Monday - Thursdays (9:00 - 5:00), Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz, can be reached on (571) 272 - 2180. The fax phone number for the organization where this application where this application or proceeding is assigned is (703) 872 - 9306.

DD

OD/2855

3/16/05



**MAX NOORI
PRIMARY EXAMINER**